

### **REMARKS**

This paper responds to the Final Office Action mailed on July 20, 2005. Claims 21, 25, 33 and 38 are amended such that claims 21-40 are now pending in this application.

#### **Interview Summary**

Applicant thanks Examiner Broussard for his courtesy during the telephone interview held on August 18, 2005 with Applicant's representative, Andrew R. Peret. Examiner Broussard discussed the amended claims and the cited references with Applicant's attorney.

Applicant's attorney and Examiner Broussard agreed that the pending rejections of claims 21-26 and 33-40 appear to be overcome by the amended claims. Examiner Broussard indicated that further searching and reconsideration would be required as to those claims.

Applicant's attorney and Examiner Broussard also discussed the pending rejections of claims 27-32 and no agreement was reached.

#### **§102 Rejection of the Claims**

Claims 21-26, 33, 35 and 36 were rejected under 35 USC § 102(b) as being anticipated by Nelson et al. (U.S. 6,046,905). As discussed during the interview, this rejection is overcome by the claims as amended.

Reconsideration and allowance of claims 21-26, 33, 35 and 36 are respectfully requested.

#### **§103 Rejection of Claims 27-32 and 34**

Claims 27-32 and 34 were rejected under 35 USC § 103(a) as being unpatentable over Nelson et al. in view of Johnson et al. (U.S. 4,321,423). The Examiner acknowledges at page 4 of the Office Action that "Nelson lacks specific teaching of wherein the pin is soldered to the motherboard to couple the heat sink to the electronic device and the motherboard."

#### **Claims 27-32**

Applicant respectfully submits that the Examiner failed to establish a legally sufficient motivation to combine the references. To do that the Examiner must show that some objective

teaching in the prior art or some knowledge generally available to one of ordinary skill in the art would lead an individual to combine the relevant teaching of the references. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

The court in *Fine* stated that:

Obviousness is tested by "what the combined teaching of the references would have suggested to those of ordinary skill in the art." *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 878 (CCPA 1981)). But it "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination." *ACS Hosp. Sys.*, 732 F.2d at 1577, 221 USPQ at 933. And "teachings of references can be combined *only* if there is some suggestion or incentive to do so."

*Id.* (emphasis in original).

Applicant respectfully submits that there is no suggestion or motivation to combine Nelson and Johnson because the cited references teach away from such a combination. A factor cutting against a finding of motivation to combine or modify the prior art is when the prior art teaches away from the claimed combination. A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path the applicant took. *In re Gurley*, 27 F.3d 551, 31 USPQ 2d 1130, 1131 (Fed. Cir. 1994); *United States v. Adams*, 383 U.S. 39, 52, 148 USPQ 479, 484 (1966); *In re Sponnoble*, 405 F.2d 578, 587, 160 USPQ 237, 244 (C.C.P.A. 1969); *In re Caldwell*, 319 F.2d 254, 256, 138 USPQ 243, 245 (C.C.P.A. 1963).

Applicant respectfully submits that Nelson and Johnson teach away from one another. Nelson teaches away from any type of soldered connection between the pins and motherboard as described in Johnson. Applicant respectfully refers the Examiner to Nelson at col. 1, lines 41-49; col. 2, lines 14-19 & 63-65; and col. 3, lines 4-6, which describe that Nelson uses the bent portions 38 of the spring 32 to compensate for manufacturing tolerances that would otherwise increase thermal impedance between the thermal element 24 and the integrated circuit package 12. Applicant notes that soldering the pins 26 to the motherboard as described in Nelson would not allow the cartridge 10 to compensate for manufacturing tolerances (which is the express purpose of the cartridge 10 design disclosed in Nelson).

Applicant can not see why one of ordinary skill in the art would solder the pins 26 disclosed in Nelson to the motherboard. First, there is no need to connect the pins 26 to the motherboard as the bent portions 38 of the spring 32 are already connected to the pins 26. Therefore, connecting the pins 26 to the motherboard would be redundant. Second, connecting the pins 26 to the motherboard in Nelson would contradict the need for the pins 26 to move through the motherboard as the spring 32 deflects to accommodate packages of varying tolerances (see, e.g., Nelson at col. 1, lines 41-49; col. 2, lines 14-19 & 63-65; and col. 3, lines 4-6).

Applicant also can not see where one of ordinary skill in the art would incorporate the spring 32 design disclosed in Nelson into the device disclosed in Johnson because Johnson teaches away from any type of spring (or clip) design. Johnson teaches using a spacer 17 to maintain a particular height between the motherboard and a heat sink such that Johnson is unable to compensate for any varying manufacturing tolerances (see Johnson at col. 3, lines 32-36). In addition, the deflecting springs 32 of Nelson are not required in the device of Johnson because Johnson describes using a soldered connection (which is an inherently fixed connection).

Allowance of claims 27-32 is respectfully requested.

#### Claim 34

As discussed during the interview, this rejection of claim 34 is overcome by the claims as amended.

Applicant respectfully submits that the statement made by the Examiner at page 8 of the Office Action that “it would have been obvious to take the suggestion of soldered connections of Johnson to use instead of the clamp taught by Nelson to provide the pull force for the heat sink” is a mere conclusory statement of subjective belief because the statement is similar to the statements made by the Examiner and board in *In re Lee*, 277 F.3d 1338 (Fed. Cir. 2002).

“With respect to Lee’s application, neither the examiner nor the Board adequately supported the selection and combination of the Nortrup and Thunderchopper references to render obvious that which Lee described. The examiner’s conclusory statements that

‘the demonstration mode is just a programmable feature which can be used in many different devices for providing automatic introduction by adding the proper programming software’ and that “another motivation would be that the automatic demonstration mode is user friendly and it functions as tutorial” do not adequately address the issue of motivation to combine. This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill in the art would have been lead to this combination of references, simply to use ‘[use] that which the inventor taught against its teacher.’ *W.L. Gore V. Garlock, Inc.*, 721 F. 2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).” *Lee*, at 1343, 1344.

Applicant also respectfully submits that the only teaching of “a pin that extends through the opening in the heat sink, the pin being soldered to the motherboard to couple the heat sink to the electronic device and the motherboard” in combination with “a member within the opening in the heat sink, the member being between the heat sink and the pin” is found in Applicant’s disclosure.

Reconsideration and allowance of claims 27-32 and 34 are respectfully requested.

*§103 Rejections of Claims 37-40*

Claim 37 was rejected under 35 USC § 103(a) as being unpatentable over Nelson et al. in view of Ruegg (U.S. 4,266,267).

Claims 38 and 39 were rejected under 35 USC § 103(a) as being unpatentable over Nelson et al. in view of Cohen (U.S. 6,549,410).

Claim 40 was rejected under 35 USC § 103(a) as being unpatentable over Nelson et al. in view of Cohen (U.S. 6,549,410), and further in view of Johnson et al. (U.S. 4,321,423).

As discussed during the interview, these rejections of claims 37-40 are overcome by the claims as amended.

Reconsideration and allowance of claims 37-40 are respectfully requested.

*Reservation of Right to File Continuation or Divisional Applications*

Applicant respectfully traverses the pending 35 USC § 102 & 103 rejections. Applicant reserves the right to file a continuation application relating to any of the original and/or canceled claims at a later date. Applicant also respectfully reserves the right to traverse any statements in the Office Action relating to the rejections (e.g., under MPEP 2144.04 among other things). Applicant is expressly not admitting to any assertions made in the Office Action.

*Reservation of Right to Swear Behind References*

Applicant reserves the right to swear behind any references which are cited in a rejection under 35 U.S.C. §§102(a), 102(e), 103/102(a), and 103/102(e). Statements distinguishing the claimed subject matter over the cited references are not to be interpreted as admissions that the references are prior art.

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Title: HEAT SINK ASSEMBLY AND METHOD OF ATTACHING A HEAT SINK TO AN ELECTRONIC DEVICE ON A MOTHERBOARD

Assignee: Intel Corporation

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney, Andrew Peret at (262) 646-7009, or the below signed attorney to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 2 day of September 2005.

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